

REMARKS

Claims 1-12 stand rejected under 103 as being unpatentable over AAPA in view of Wakabayashi. Solely in order to expedite issuance of the present application by reducing issues, claims 8-10 have been canceled without prejudice/disclaimer to the subject matter embodied thereby. Claims 1, 6, 11 and 12 are independent. This rejection is respectfully traversed for the following reasons.

A. Claim 1

Claim 1 recites in pertinent part, “forming, in the buffer coat film, apertures including regions of the buffer coat film located *on the whole periphery region* having a certain distance from the periphery of the wafer, above scribe line regions and above the parts of the bonding pads, respectively” (emphasis added). One exemplary embodiment of the present invention as recited in claim 1 is shown in Figures 1B and 3 with corresponding disclosure at page 7, lines 19-20 of Applicants’ specification.

In contrast, as shown in Figure 22 of AAPA, part of the buffer coat film on the entire periphery region is NOT removed. Moreover, as shown in Figure 3, Wakabayashi discloses trenches 12 provided within the chip forming region along the dicing streets (*see* col. 3, lines 52-63. That is, trenches 12 are NOT located on the entire periphery region as embodied by claim 1. Accordingly, it is respectfully submitted that neither AAPA nor Wakabayashi, alone or in combination, disclose or suggest each and every limitation of claim 1 as amended.

B. Claim 6

Claim 6 recites in pertinent part, “(d) forming, in the buffer coat film, apertures including regions of the buffer coat film located above scribe line regions and above the parts of the bonding pads, respectively, and reducing the thickness of part of the buffer coat film located on

the whole periphery region of the wafer having a certain distance from the periphery of the wafer” (emphasis added). One exemplary embodiment of the present invention as recited in claim 6 is shown in Figures 7B and 9 with corresponding disclosure at page 12, line 27 – page 13, line 4 of Applicants’ specification.

In contrast, as shown in Figure 22 of AAPA, the thickness of a part of the buffer coat film on the entire periphery region is NOT reduced. Turning to Wakabayashi, as a preliminary matter, it is respectfully submitted that the seal film 13 is for sealing the chip in the package and is not removed after being deposited, and therefore does not correspond to the buffer coat film of the present invention. Nonetheless, even assuming *arguendo* seal film 13 of Wakabayashi can correspond to the buffer coat film of the present invention, as shown in Figure 4, only the thickness of the part of the seal film 13 on the upper surface of the pillar-shaped electrodes 6 is reduced, but the thickness of the part of the seal film 13 on the entire periphery region is NOT reduced as embodied by claim 6. Accordingly, it is respectfully submitted that neither AAPA nor Wakabayashi, alone or in combination, disclose or suggest each and every limitation of claim 6 as amended.

C. Claim 11

Claim 11 recites in pertinent part, “(d) forming, in the buffer coat film, apertures including regions of the buffer coat film located above parts of scribe line regions and above parts of the bonding pads with connection parts connecting *the adjacent chip regions formed by connecting four corners of each chip* left among the apertures” (emphasis added). One exemplary embodiment of the present invention as recited in claim 11 is shown in Figure 15 of Applicants’ drawings.

In contrast, as shown in Figure 22 of AAPA, adjacent chip regions are formed NOT connected to the buffer coat film and without a connection part. Turning to Wakabayashi, as mentioned above, it is respectfully submitted that the seal film 13 is for sealing the chip in the package and is not removed after being deposited, and therefore does not correspond to the buffer coat film of the present invention. Nonetheless, even assuming *arguendo* seal film 13 of Wakabayashi can correspond to the buffer coat film of the present invention, as shown in Figure 6, Wakabayashi does not disclose a connection part connecting the adjacent chip regions formed by connecting four corners of each chip. Accordingly, it is respectfully submitted that neither AAPA nor Wakabayashi, alone or in combination, disclose or suggest each and every limitation of claim 11 as amended.

D. Claim 12

Claim 12 recites in pertinent part, “a buffer coat film that covers part of the passivation film and has apertures obtained by removing regions of the buffer coat film located above parts of scribe line regions and above parts of the bonding pads with connection parts connecting *the adjacent chip regions formed by connecting four corners of each chip* left among the apertures” (emphasis added). One exemplary embodiment of the present invention as recited in claim 12 is shown in Figure 15 of Applicants’ drawings.

In contrast, as shown in Figure 22 of AAPA, adjacent chip regions are formed NOT connected to the buffer coat film and without a connection part. Turning to Wakabayashi, as mentioned above, it is respectfully submitted that the seal film 13 is for sealing the chip in the package and is not removed after being deposited, and therefore does not correspond to the buffer coat film of the present invention. Nonetheless, even assuming *arguendo* seal film 13 of Wakabayashi can correspond to the buffer coat film of the present invention, as shown in Figure

6, Wakabayashi does not disclose a connection part connecting the adjacent chips regions formed by connecting four corners of each chip. Accordingly, it is respectfully submitted that neither AAPA nor Wakabayashi, alone or in combination, disclose or suggest each and every limitation of claim 12 as amended.

E. Conclusion

The Examiner is directed to MPEP § 2143.03 under the section entitled "All Claim Limitations Must Be Taught or Suggested", which sets forth the applicable standard:

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (citing *In re Royka*, 180 USPQ 580 (CCPA 1974)).

In the instant case, the pending rejection does not "establish *prima facie* obviousness of [the] claimed invention" as recited in the independent claims because the proposed combination fails the "all the claim limitations" standard required under § 103.

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as the independent claims are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

Based on all the foregoing, it is respectfully submitted that all pending claims are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejection under 35 U.S.C. § 103 be withdrawn.

CONCLUSION

Having fully and completely responded to the Office Action, Applicants submit that all of the claims are now in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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